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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/516,354	SERNA ET AL.	
	Examiner	Art Unit	
	OTIS L. THOMPSON, JR	2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 November 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☒ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/29/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Art Unit: 2619

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application PCT/IB02/01960 filed on May 31, 2002. It is noted, however, that applicant has not filed a certified copy of the PCT/IB02/01960 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 20-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 20 recites the limitation "the paging request message". There is insufficient antecedent basis for this limitation in the claim. For the purposes of examination, the claim is treated as being dependent upon claim 18 instead of claim 12.

5. Claim 21 recites the limitation "said first network device". There is insufficient antecedent basis for this limitation in the claim. It is noted that Applicant previously recites "a first network node" which appears to be the same as "said first network device". For the purposes of examination, the limitation "said first network device" is interpreted as being "said first network node".

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 7, 8, 10-14, 17-22, 25-29, 31, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Admitted Prior Art (BACKGROUND OF THE INVENTION), hereinafter referred to as AAPA.

8. **Regarding claim 1,** AAPA discloses *a method for changing a routing packet between a first data network* (Page 1 line 22, see "...core network [CN]...") *and a mobile station attached to a second data network* (Page 1 lines 23, see "...mobile stations [MS] attached to RAN [radio access network]...") *said first network comprising at least one first network node* (Page 3 under Core Network Architecture, lines 24-26, see "...Mobile-services Switching Center [MSC] [i.e. first network node] controls...), *said second data network comprising at least a second network node and a third network node* (Page 1 under UTRAN Architecture, lines 33-35, see "...plurality of Radio Network Subsystems each controlled by a Radio Network Controller [RNC] [i.e. second and third network nodes in second data network]..."; Page 2 under GERAN Architecture, lines 17-20, see "...plurality of Base Station Systems each controlled by a Base Station Controller [i.e. second and third network nodes in a second data network]..."; Second data network can be either UTRAN or GERAN), *said routing path comprising before said change said*

first network node, said second network node and said third network node (Page 5 lines 32-37, see "...radio handover...moves the Iu reference point between the CN node [i.e. MSC, i.e. first network node] and the RAN...from a first RNC [i.e. second network node]...first RNC is the Controlling RNC or Serving RNC...RNC of the second cell is a Drift RNC [i.e. third network node]...", i.e. path before change), *said routing path comprising after said change said first network node, and said third network node* (Page 5 lines 32-34, see "...radio handover...moves the Iu reference point between the CN node [i.e. MSC, i.e. first network node] and the RAN...from a first RNC [i.e. second network node]...to a second RNC [i.e. Drift RNC, i.e. third network node]..." i.e. path after change; SRNC and DRNC of UTRAN correspond to SBSC and DBSC of GERAN respectively), *said method comprising the step of transferring an information element from said second network node to said third network node* (Page 6 lines 18-22, see "...MSC sends paging request to a serving BSC/RNC [SBSC]...SBSC sends the paging request via a Iur-g interface to drifting BSC/RNCs [DBSCs/DRNCs]..."), *wherein said information element comprises an identification element of said first network node* (Page 7 lines 11—7, see "...including the MSC/VLR [Visitor Location Register] identity in a CS paging message...MS will know the address of the originating CN...").

9. **Regarding claim 2,** AAPA discloses that *said information element is transferred directly from said second network node to said third network node* (Page 6 lines 18-22, see "...MSC sends paging request to a serving BSC/RNC [SBSC]...SBSC [i.e. second network node] sends the paging request via a Iur-g interface to drifting BSC/RNCs [DBSCs/DRNCs] [i.e. third network node]..."; Page 7 lines 11—7, see "...including the

MSC/VLR [Visitor Location Register] identity in a CS paging message...MS will know the address of the originating CN...").

10. **Regarding claim 7,** AAPA discloses that *said second network node has a serving-network-node function in said second data network for said mobile station before said change, and said third network node has said serving-network-node function in said second data network for said mobile station after said change* (Page 5 lines 34-37, see "...before relocation, the first RNC [i.e. second network node] is the controlling RNC or Serving RNC [i.e. serving function before change] while the RNC of the second cell is a Drift RNC [i.e. third network node]..."; Page 6 lines 1-2, see "...by relocation, the role of the serving RNC in relation to a mobile station moves from the first to the second RNC [i.e. third network node, i.e. serving function after change]).

11. **Regarding claim 8,** AAPA discloses that *said third network node has a drift-network-node function before said change* (Page 5 lines 34-37, see "...before relocation, the first RNC is the controlling RNC or Serving RNC while the RNC of the second cell is a Drift RNC [i.e. third network node, i.e. drift function before change]...").

12. **Regarding claim 10,** AAPA discloses *a further step of saving said information element or said identification element to a data storage device communication with said second network node before said step of transferring said information element to said third network node* (Page 7 lines 1-3, "...serving BSC/RNC [i.e. second network node] may store [i.e. saving] the CN identity of the MSC originating the paging request...").

13. **Regarding claim 11,** AAPA discloses *a further step of saving said information element or said identification element to a data storage device communicating with said third network node after said step of transferring said information element to said third*

network node (Page 7 lines 11—7, see "...including the MSC/VLR [Visitor Location Register] identity in a CS paging message...MS will know the address of the originating CN...after suitable extraction...new SRNC/BSC [i.e. third network node] after relocation [i.e. after said step of transferring said information element]..."; Saving the identity of the MSC/VLR in the new SRNC/BSC is inherent because the MS extracts the address of the MSC/VLR).

14. **Regarding claim 12,** AAPA discloses that *said second data network is a Radio Data Network (RDA)* (Page 1 lines 22-23, see "...radio access networks [RAN]...").

15. **Regarding claim 13,** AAPA discloses that *said second data network comprises a Global System for Mobile Communications (GSM), Enhanced Data Rates for GSM Evolution Radio Access Network (GERAN), and/or a Universal Terrestrial Radio Access Network (UTRAN)* (Page 1 lines 24-29, see "...Universal Terrestrial RAN [UTRAN]...comply with GSM/EDGE Radio Access Network [GERAN]...still supporting the pre-existing GSM [Global System for Mobile Communication]...").

16. **Regarding claim 14,** AAPA discloses that *said second network node is related to said GERAN and said third network node is related to said UTRAN, or said second network node is related to said UTRAN and said third network node is related to said GERAN* (Page 2 lines 23-29, see "...BSCs...can be interconnected together through Iur-G interfaces...communication between a GERAN BSC and a UTRAN RNC is handled using an additional Iur-g interface..."; Claimed invention is inherent by this disclosure).

17. **Regarding claim 17,** AAPA discloses *routing response data answering request data from said mobile station to said first network node* (Page 6 lines 36-37, see "...Paging Response message is to be routed to the MSC..."), *said request data originating*

at said first network node in said first data network (Page 6 lines 9-10, see "...paging request sent form the MSC to the BSC serving the MS..."), *said request data having been routed along said routing path before said change, said response data being routed along said routing path after said change* (Page 7 lines 5-6, see "...routing path for the paging response will be changed, compared to the routing path for the paging request...").

18. **Regarding claim 18,** AAPA discloses that *the request data comprise a paging request message and the response data comprise a paging response message* (Page 6 line 10, see "...paging request message..."; Page 6 lines 36-37, see "...paging response message...").

19. **Regarding claim 19,** AAPA discloses that *said first network node and said third network node are related in common to a packet-switched network domain or to a circuit switched network domain* (Page 5 lines 32-34, see "...radio handover...moves the Iu reference point between the CN node [i.e. MSC, i.e. first network node] and the RAN...from a first RNC [i.e. second network node]...to a second RNC [i.e. Drift RNC, i.e. third network node]..."; Relationship of circuit-switched network domain or packet-switched network domain between the first and third nodes is inherent since a connection, to which Iu reference point is being moved, exists between the two.)

20. **Regarding claim 20,** AAPA discloses that *the paging request message comprises an International Mobile Subscriber Identity (IMSI) of the mobile station* (Page 6 lines 11-13, see "...IMSI paging message the MSC uses in the paging message the International Mobile Subscriber Identity [IMSI] of the user...").

21. **Regarding claim 21,** AAPA discloses *a data network system comprising a first data network* (Page 1 line 22, see "...core network [CN]...") *with at least a first network node* (Page 3 under Core Network Architecture, lines 24-26, see "...Mobile-services Switching Center [MSC] [i.e. first network node] controls...) *and a second data network* (Page 1 lines 23, see "...mobile stations [MS] attached to RAN [radio access network]...") *with at least a second network node and a third network node* (Page 1 under UTRAN Architecture, lines 33-35, see "...plurality of Radio Network Subsystems each controlled by a Radio Network Controller [RNC] [i.e. second and third network nodes in second data network]..."; Page 2 under GERAN Architecture, lines 17-20, see "...plurality of Base Station Systems each controlled by a Base Station Controller [i.e. second and third network nodes in a second data network]..."; Second data network can be either UTRAN or GERAN) *said second network node being adapted to control a connection between a mobile station and said first network node, said connection being routed through said second network node, said third network node communicating with said second network node and said mobile station* (Page 5 lines 35-37, see "...function of DRNC [i.e. third network node] is controlled by the SRNC using the Iur interface [i.e. communicating with second network node]..."; Page 6 lines 1-2, see "...role of the SRNC in relation to the mobile station moves from the first to the second RNC [i.e. DRNC] [i.e. third network node]...", i.e. communicating with the mobile station), *and being adapted to either allocate at least one communication channel between said mobile station and said third network node for said connection under the control of said second network node* (Page 5 lines 35-37, see "...function of DRNC [i.e. third network node] is controlled by the SRNC using the Iur interface [i.e. under control of second network node]...";

Allocation of communication channel between mobile station and third network node is inherent), *or, upon transfer of control data relating to said connection from said second network node to said third network node, control said connection independently from said first network device* (Page 6 lines 1-2, see "...role of the SRNC in relation to the mobile station moves from the first [i.e. said first network device, original SRNC] to the second RNC [i.e. DRNC] [i.e. third network node]...", i.e. independent from said first network device), *wherein said second network node is additionally adapted to transfer an identification element related to said first network node in said second data network from said second network node to said third network node* (Page 6 lines 18-22, see "...MSC sends paging request to a serving BSC/RNC [SBSC]...SBSC [i.e. second network node] sends the paging request via a Iur-g interface to drifting BSC/RNCs [DBSCs/DRNCs] [i.e. third network node, i.e. transfer from second to third]..."; Page 7 lines 11—7, see "...including the MSC/VLR [Visitor Location Register] identity [i.e. identification element related to said first network node] in a CS paging message...MS will know the address of the originating CN...").

22. **Regarding claim 22,** AAPA discloses that *the second network node is adapted to transfer said information element is transferred directly to said third network node* (Page 6 lines 18-22, see "...MSC sends paging request to a serving BSC/RNC [SBSC]...SBSC [i.e. second network node] sends the paging request via a Iur-g interface to drifting BSC/RNCs [DBSCs/DRNCs] [i.e. third network node]..."; Page 7 lines 11—7, see "...including the MSC/VLR [Visitor Location Register] identity in a CS paging message...MS will know the address of the originating CN...").

23. **Regarding claim 25,** AAPA discloses *that said second network node communicates with a storage device and is adapted to save said identification element to said storage device* (Page 7 lines 1-3, "...serving BSC/RNC [i.e. second network node] may store [i.e. saving] the CN identity of the MSC originating the paging request..."; Communication with storage device is inherent).

24. **Regarding claim 26,** AAPA discloses that *said third network node communicates with a storage device and is adapted to save said identification element in said storage device* (Page 7 lines 11—7, see "...including the MSC/VLR [Visitor Location Register] identity in a CS paging message...MS will know the address of the originating CN...after suitable extraction...new SRNC/BSC [i.e. third network node] after relocation [i.e. after said step of transferring said information element]..."; Communication with a storage device and saving the identity of the MSC/VLR in the new SRNC/BSC is inherent because the MS extracts the address of the MSC/VLR).

25. **Regarding claim 27,** AAPA discloses that *said first data network is a core network and said second data network is a Radio Access Network (RAN)* AAPA discloses that *said second data network is a Radio Data Network (RDA)* (Page 1 lines 22-23, see "...network...comprises a core network [CN], radio access networks [RAN]...").

26. **Regarding claim 28,** AAPA discloses that *said second data network comprises a GERAN and a UTRAN* (Page 1 lines 24-29, see "...Universal Terrestrial RAN [UTRAN]...comply with GSM/EDGE Radio Access Network [GERAN]..."; Page 2 lines 23-29, see "...BSCs...can be interconnected together through Iur-g interfaces...communication between a GERAN BSC and a UTRAN RNC is handled using an additional Iur-g interface...", i.e. second data network comprises GERAN and UTRAN).

27. **Regarding claim 29,** AAPA discloses that *said second network node is related to said GERAN and said third network node is relate to said UTRAN, or said second network node is related to said UTRAN and said third network node is related to said GERAN* (Page 2 lines 23-29, see "...BSCs...can be interconnected together through Iur-G interfaces...communication between a GERAN BSC and a UTRAN RNC is handled using an additional Iur-g interface..."; Claimed invention is inherent by this disclosure).

28. **Regarding claim 31,** AAPA discloses that *said first network node is a Mobile-services Switching Center (MSC), and said second and third network nodes are either a Radio Network Controller (RNC) or a Base Station Controller (BSC)* (Page 3 lines 24-26, see "...Mobile-services Switching Center (MSC) controls the communication between the GERAN Base Station System (BSS) or a UTRAN RNS..."; Page 1 under UTRAN Architecture, lines 33-35, see "...plurality of Radio Network Subsystems each controlled by a Radio Network Controller [RNC] [i.e. second and third network nodes in second data network]..."; Page 2 under GERAN Architecture, lines 17-20, see "...plurality of Base Station Systems each controlled by a Base Station Controller [i.e. second and third network nodes in a second data network]..."; Second data network can be either UTRAN or GERAN), *and said forth and fifth network nodes are SGSNs* (Page 3 lines 19-22, see "...Serving GPRS Support Node [SGSN] keeps track...SGSN is connected to GERAN base station system...and/or to the UTRAN..."; It is inherent that each BSC for GERAN (RNC for UTRAN) has an SGSN. Serving BSC (serving RNC) has an SGSN [i.e. fourth network node], and drift BSC (drift RNC) has an SGSN [i.e. fifth network node]).

29. **Regarding claim 32,** AAPA discloses *a network device for operation in a radio data network, adapted to establish, maintain and release a connection between a*

mobile station attached to the radio data network and a second network device in a second data network (Page 5 lines 31-37, see "...SRNS relocation procedure moves [i.e. release a connection between mobile station and second network device] the Iu reference point between the CN [i.e. second data network, MSC is second network device] and the RAN [i.e. radio data network]...from a first RNC [i.e. network device]...before relocation, the first RNC is the Controlling RNC or Serving RNC [i.e. establish and maintain a connection between mobile station and second network device]..."), *and transfer control data to a third network device operating in said radio data network* (Page 5 lines 31-37, see "...SRNS relocation procedure moves [i.e. transfer control data] the Iu reference point between the CN and the RAN [i.e. radio data network]...from a first RNC to a second RNC [i.e. third network device]..."), *said control data serving to establish or maintain a connection between said mobile station and said second network device* (Page 6 lines 1-2, see "...role of the serving RNC [SRNC] [i.e. establish or maintain a connection between MSC and mobile station] in relation to a mobile station moves from the first to the second RNC..."), *wherein said network device is additionally adapted to transfer to said third network device an identification element related to said second network device* (Page 6 lines 18-22, see "...MSC sends paging request to a serving BSC/RNC [SBSC]...SBSC [i.e. network device] sends the paging request via a Iur-g interface to drifting BSC/RNCs [DBSCs/DRNCs] [i.e. third network device, i.e. transfer to third]..."; Page 7 lines 11—7, see "...including the MSC/VLR [Visitor Location Register] identity [i.e. identification element related to said second network device] in a CS paging message...MS will know the address of the originating CN...").

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Claim Rejections - 35 USC § 103

30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

31. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Kalliokulju et al. (US 2004/0100913 A1).

32. AAPA discloses the transfer of the MSC/VLR identity via paging but does not specifically disclose that *said identification element of said first network node is include in a "FORWARD SRNS CONTEXT" message sent from said second network node to said third network node*.

However, Kalliokulju et al. discloses an intersystem handover (from GERAN to UTRAN and vice versa) in which parameter values are carried as a separate information element in Relocation Commit or Forward SRNS Context message (Paragraph 0039, see "...parameter values can be carried as a separate..."). This disclosure shows that the technique of transferring the MSC/VLR (i.e. first network node) identity between SBSC/SRNC (i.e. second network node) and the DBSC/DRNC (i.e. third network node) does not have to be a paging technique. Instead, the transfer can be performed using a *FORWARD SRNS CONTEXT* message. The advantage of the method of Kalliokulju et al. is that it enables a supply of continuous values for at least one parameter used in packet header creation after a change of connection from a first network element to a second network element.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Kalliokulju et al. into AAPA in order to enable a supply of continuous values for at least one parameter used in packet header creation after a change of connection from a first network element to a second network element.

33. Claims 3 and 23 are rejected under 35 U.S.C 103(a) as being unpatentable over AAPA in view of Boudreaux (US 6,466,556 B1).

34. **Regarding claims 3 and 23,** AAPA discloses the storing and transferring of said information element from the second network node to the third but does not specifically disclose that *said information element is transferred from said second network node to at least one fourth network node in said first data network and then from said fourth to said third network node*.

However, Boudreaux discloses that as a handover process begins, the SRNC (i.e. *second network node*) sends a message to the SGSN (i.e. *fourth network node*) that relocation is required. Next, the SGSN sends and SRNC Relocation Request message to the DRNC (i.e. *third network node*) (Column 7 lines 3-13). Since the MSC/VLR identity is stored in the second network node, it is capable of sending that identity along with messages to the fourth network node and from the fourth network node to the third network node. The advantage of the method of Boudreaux is that handover of real-time packet data flow is performed without disrupting communication between user equipment and the anchor packet gateway (Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Boudreaux into AAPA in order to perform handover of real-time packet data flow without disrupting communication between user equipment and the anchor packet gateway.

35. Claims 4-6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Suumaki et al. (US 6,968,190 B1).

36. **Regarding claim 4 ,** AAPA discloses the storing and transferring of said information element from the second network node to the third but does not specifically disclose that *said information element is transferred from said second network node to at least one fourth network node in said first data network, then from said fourth network node to a fifth network node in said first data network, and then from said fifth network node to the third network node.*

However, Suumaki et al. discloses a method in which a source SRNC (i.e. *second network node*) sends SRNC Relocation Required message to the SGSN1 (i.e. *fourth network node in first network*). This message includes parameters such as the target RNC identifier and an information field (Column 12 lines 14-18). The SGSN will then send a Forward SRNC relocation request to the applicable SGSN (e.g. SGSN2) (i.e. *fifth network node in first network*) including information received from the Source SRNC (Column 12 lines 27-30). The SGSN2 send an SRNC Relocation Request message to the target RNC (i.e. *third network node*) (Column 12 lines 39-41). Since the MSC/VLR identity is stored in the second network node, it is capable of sending that identity data along with the Relocation Required message to the fourth network node, which sends it

to the fifth network node, which sends it to the third network node. This method, disclosed as the "Resource Reservation" Phase, allows the system to reserve the necessary resources before a handover/handoff is completed (Column 12, see "Resource Reservation Phase").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Suumaki et al. into AAPA in order to reserve the necessary resources before a handover/handoff is completed.

37. **Regarding claim 5,** AAPA does not specifically disclose that *said fourth network node in said first data network has a serving-network-node function for said second network node before said change, and said fifth network node in said first data network has a serving-network-node function for said third network node after said change.*

However, Suumaki et al. discloses that before the SRNS relocation, user equipment is registered in SGSN1 (i.e. *serving function before change*) (Column 11 lines 47-50). After SRNS relocation, user equipment is register in SGSN2 (i.e. *serving function after change*) (Column 11 lines 54-56). This method of exchange ensures that no user packet is lost nor duplicated during SRNS relocation procedure (Column 11 lines 63-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Suumaki et al. into AAPA in order to ensure that no user packet is lost or duplicated during SRNS relocation procedure.

38. **Regarding claim 6,** AAPA in view of Suumaki et al. discloses that *said first network node is related to a packet-switched domain of said first network and said fourth*

network node is related to a circuit-switched domain of said first network, or vice versa (AAPA, Page 3 lines 19-22, see "...PS-domain [i.e. packet-switched] a Serving GPRS Support Node (SGSN) [i.e. fourth node of first network]..."; Page 3 lines 24-26, see "...CS-domain [i.e. circuit-switched] a Mobile-services Switching Center (MSC) [i.e. first node of first network]...").

39. **Regarding claim 9,** AAPA in view of Suumaki et al. discloses that *a plurality of first and fourth and fifth nodes communicates in parallel with said second network node before said change, and with said third network node after said change* (AAPA, Page 4 lines 15-22, see "...pool area...roam without need to change the serving CN node, i.e. the serving SGSN (i.e. fourth and fifth nodes) or the serving MSC...Iuflex pool area may be served by one CN node or by a plurality of CN nodes (i.e. plurality of first, fourth, and fifth nodes) in parallel...").

40. Claims 16, 24, and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Boudreaux, as applied to claims 3 and 23 respectively above, and further in view of Suumaki et al.

41. **Regarding claim 16,** AAPA in view of Boudreaux discloses the storing and transferring of said information element from the second network node to the third but does not specifically disclose that *said information element of said first network node is included in a "RELOCATION REQUIRED" message transferred from said second network node to said fourth or fifth network node, respectively, and is further included in a "RELOCATION REQUEST" message transferred from said first or fourth network node or fifth network node, respectively, to said third network node.*

However, Suumaki et al. discloses a method in which a source SRNC (i.e. *second network node*) sends SRNC Relocation Required message to the SGSN1 (i.e. *fourth network node in first network*). This message includes parameters such as the target RNC identifier and an information field (Column 12 lines 14-18). The SGSN will then send a Forward SRNC relocation request to the applicable SGSN (e.g. SGSN2) (i.e. *fifth network node in first network*) including information received from the Source SRNC (Column 12 lines 27-30). The SGSN2 send an SRNC Relocation Request message to the target RNC (i.e. *third network node*) (Column 12 lines 39-41). Since the MSC/VLR identity is stored in the second network node, it is capable of sending that identity data along with the Relocation Required message to the fourth network node, which sends it to the fifth network node, which sends it to the third network node. This method, disclosed as the "Resource Reservation" Phase, allows the system to reserve the necessary resources before a handover/handoff is completed (Column 12, see "Resource Reservation Phase").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Suumaki et al. into the system of AAPA in view of Boudreaux in order to reserve the necessary resources before a handover/handoff is completed.

42. **Regarding claim 24,** AAPA in view of Boudreaux discloses the storing and transferring of said information element from the second network node to the third but does not specifically disclose that *a fifth network node in said first data network, wherein said fourth network node is adapted to forward said received identification*

element to said fifth network node, and said fifth network node is adapted to forwarding said identification element to said third network node..

However, Suumaki et al. discloses a method in which a source SRNC (i.e. *second network node*) sends SRNC Relocation Required message to the SGSN1 (i.e. *fourth network node in first network*). This message includes parameters such as the target RNC identifier and an information field (Column 12 lines 14-18). The SGSN will then send a Forward SRNC relocation request to the applicable SGSN (e.g. SGSN2) (i.e. *fifth network node in first network*) including information received from the Source SRNC (Column 12 lines 27-30). The SGSN2 send an SRNC Relocation Request message to the target RNC (i.e. *third network node*) (Column 12 lines 39-41). Since the MSC/VLR identity is stored in the second network node, it is capable of sending that identity data along with the Relocation Required message to the fourth network node, which sends it to the fifth network node, which sends it to the third network node. This method, disclosed as the "Resource Reservation" Phase, allows the system to reserve the necessary resources before a handover/handoff is completed (Column 12, see "Resource Reservation Phase").

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to incorporate the teachings of Suumaki et al. into the system of AAPA in view of Boudreaux in order to reserve the necessary resources before a handover/handoff is completed.

43. **Regarding claim 30,** AAPA in view of Suumaki et al. and further in view of Boudreaux discloses that *a plurality of first and/or fourth and/or fifth nodes communicates in parallel with said second network node before said change, and/or*

with said third network node after said chang e (AAPA, Page 4 lines 15-22, see "...pool area...roam without need to change the serving CN node, i.e. the serving SGSN (i.e. fourth and fifth nodes) or the serving MSC...luflex pool area may be served by one CN node or by a plurality of CN nodes (i.e. plurality of first, fourth, and fifth nodes) in parallel...").

Conclusion

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Einola et al. (US 6,438,370 B1) discloses a location update method and inter core network entity handover method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OTIS L. THOMPSON, JR whose telephone number is (571)270-1953. The examiner can normally be reached on Monday to Thursday 7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on (571)272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2619

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/Otis L Thompson, Jr./
Examiner, Art Unit 2619

May 7, 2008

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2619